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ABSTRACT

Until recently, kindergartens were designed to foster a positive attitude toward school and provide a well-rounded development through the use of suitable play, art, and social activities. Unfortunately, many kindergarten programs have begun to rely on inappropriate materials and techniques taken from formal first-grade programs. Such programs reflect a skill-based perspective with activities and tasks hierarchically ordered. Instruction usually means the teacher presents a skill and then the children practice it on materials that are arranged by difficulty of words and sentences. An alternative approach is one that draws on the notion of reading as a thinking and understanding act and learning to read as a constructive, problem-solving process. This means that while children can be given information to learn and practice in a stepwise fashion, they must interpret the ideas and relate them to their own knowledge and experience. Three principles guide these alternative programs: (1) learning to read is supported when a classroom features familiar printed information and interesting literacy activities; (2) learning to read requires the use of diverse materials and a wide variety of tasks that are directly or indirectly related to reading, writing, speaking, and listening; and (3) learning to read is an active process. An eight-page reference list is appended. (HOD)

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CENTER FOR THE STUDY OF READING

Technical Report No. 345

KINDERGARTEN READING: A PROPOSAL FOR A PROBLEM-SOLVING APPROACH

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Abstract

Kindergarten reading instruction practices are out of step with the needs of today's children. They are outmoded notions of how children learn and inadequate approaches for presenting reading, writing and listening activities. It is proposed here that instruction that can prepare children for reading should focus on a problem-solving approach, utilizing: (a) a literacy-rich and supportive environment; (b) a multifaceted program that extends beyond reading or copying classroom materials; and (c) an emphasis on active participation by the child in learning situations.

Kindergarten Reading: A Proposal for a Problem-Solving Approach

Introduction

In a small rural midwestern elementary school, the kindergarten children file in, hang up their coats, and collect their cigar boxes of pencils, crayons, and small treasures from a shelf. There are no toys and few books on the shelves, and the boxed games and puzzles are not pulled out. No art or science areas have been set up in the room; the housekeeping corner, a sparsely furnished place, is seldom used. Children ignore the neatly displayed pictures that they have colored or cut and pasted from shapes drawn by the teacher or from commercial materials. Instead, they move their boxes of belongings to one of the five tables in the room, each of which has six small chairs, and sit down at their designated places. Few talk to their neighbors, and, curiously, no one begins to work, read, or write. Some put their heads on the table. Others look in their boxes or at other children, waiting for the school day to begin.

As the bell breaks the silence, the teacher gets up from her desk and leads the children in the pledge of allegiance, roll call, and the introduction of the reading lesson. The lesson, on words that begin with the letter T, takes 45 minutes. Everyone takes part in the same lesson, first by listening and singing along softly to the "Letter T" song. Next they answer the

teacher's questions, calling out and raising their hands; then they fill out the worksheets that go with the commercially produced lesson. The teacher walks the aisles, helping if children make errors and redirecting those that do not stay on task. While the attention of a few children strays, no one misbehaves or appears unhappy. Most of the children are eager to participate in the activity and listen seriously to the teacher's questions and directions for work. They are learning to read, they know they are learning, and they seem to appreciate the opportunity.

In a university community, a busing program in the district draws kindergarten children from low-income and professional families to the same school. As children enter and hang up their coats, they choose from a wide range of activities. The room is crowded with shelves of materials. There is a housekeeping center, blocks and painting areas, a science table, and several locations for books, puzzles, and games. Children's artwork decorates the walls. Some children come in with books in their hands, others with toys. They group with their friends on the jungle gym, build a block structure, set up a dramatic play activity in a separate small playroom, or sit on the rug, looking at a book or reading alone or with another child. The free-choice play activity continues uninterrupted for 15 or 20 minutes.

No bell announces the beginning of the school day; no formal roll is called; the teacher has not directed the whole class to begin working, but lessons have begun. The teacher has been listening to a child read and is asking questions about the story. She sits at a low table and calls children over individually to read to her, then hands out and explains math and phonics worksheet exercises and points out an exploratory science activity for them to do. As they are called on to read and are given assignments, the children shift from their chosen activity to working on math, science, and reading. There are no assigned places. Some children choose a place alone, while most sit with friends. There they ask help from one another and talk quietly about the work and other activities. When they finish the assignments, they go to the rug with a book and read. Many help one another or read together. They seem to be integrating reading and writing into their everyday activities; reading does not stand out as a separate subject. After an hour or longer, the teacher calls them together for group activities such as marking the calendar and weather for the day, story reading, and show-and-tell discussion.

In these two clasrooms reading is successfully taught, but with very dissimilar approaches. Observations in kindergartens such as these show that reading instruction can be a part of the program, and research shows positive effects from some programs, particularly those for low-income children. Kindergarten

children seem ready to learn and able to profit from letter-recognition, reading, and writing activities. There are, however, major differences in the way kindergarten reading programs are structured. These differences, which are not trivial, affect more than children's reading behavior.

Why are there such disparate reading programs in kindergarten? One reason is that literacy standards are undergoing a change, a situation that leads to the consideration of untried instructional ideas. Another reason is a lack of agreement about how children ought to be taught. Current developmental and cognitive theories are just now being interpreted and tried out, but few as yet have affected practice. Since most kindergarten teachers were schooled to follow earlier constructs about learning and since community attitudes about how to teach young children, which are also influential, reflect parents' own childhood experiences, earlier views still have a hold on reading practice.

Changes in literacy standards are described in the next section, followed by a description of theoretical changes in learning that have guided kindergarten reading instruction for the last two decades. Earlier theories focused either on maturation or on experience, while current work utilizes a problem-solving construct.

Historical Changes in Literacy

Literacy in the 17th and 18th centuries was not widespread. Records kept in parishes in Sweden, one of the countries that were literate, according to Resnick and Resnick (1977), showed that though most people could read, literacy was at a low level. Reading, reciting, and recall of religious material was typically all that was required. In the 19th century, Resnick and Resnick report, as education for children began to be compulsory, history and geography texts that cultivated love of the familiar and exalted patriotism were included in the reading curriculum. But this did not necessarily lead to wide reading because, according to Smith (1965), oral recitation of familiar written passages, rather than reading new and unfamiliar material, was stressed.

Educational testing of U.S. Army recruits during World War I helped change reading practice and literacy standards. These tests uncovered the fact that nearly 30% of the recruits could not write a simple letter or read a newspaper even though most had attended public school. These revelations led to better educational evaluation techniques and to a requirement that literacy should mean an ability to read and understand unfamiliar texts as well as familiar ones.

Literacy standards continue to be a function of changes in social needs. Today, people are being asked to go beyond leisure reading of unfamiliar texts. With the increased demands of technology, more reading is needed as part of one's work, and an

ability to analyze texts and read critically is expected. Presuming widespread literacy is not abandoned, this shift to higher literacy standards will force still more changes in reading instruction practices. Different reading instructional approaches will undoubtedly be required, even in kindergarten.

Coincidental with changes in literacy standards has been the development of different theories about learning. Currently there is a renewed emphasis on comprehension and critical reading; story reading, listening comprehension, and learning to write as well as to read are being stressed. Reviews by Mason (1985), and Teale and Sulzby (in press), suggest how earlier instructional practices were related to early reading practice. Learning to read was explained in terms of a maturational construct and then according to skill-based instruction principles. Reviews by Wagoner (1983) and Reeve and Brown (1984) describe the emerging current, problem-solving perspective.

Maturation and Reading Readiness

A maturationist view of reading development was proposed in the 1920s and 1930s based on the notion that reading skill development, like motor development, was a function of neural ripening, a genetically programmed unfolding. There was thought to be an optimum period before which instruction was fruitless, if not harmful. The theory was supported by work on twins (e.g., McGraw, 1935) that purported to show that instruction in a skill

before the appropriate period was less effective than instruction provided when the child displayed an interest in the activity.

Morphett and Washburne (1931), who accepted this view, attempted to determine the optimum time for learning to read. In a comparison of children's IQ scores at the beginning of first grade with their February and June progress in reading, they found that children with a mental age of 6.5 or above made better progress. Even though this study was later criticized (e.g., Gates & Bond, 1936), and reanalyses showed overinterpretation of the original twin studies (e.g., Hunt, 1983), the construct of readiness was retained.

A key element of the maturational perspective has been the delay of reading instruction until children expressed a readiness to learn. Until fairly recently, then, parents were admonished not to teach their children to read before they went to school. Kindergarten teachers were trained to organize instruction around more general social, motor, and cognitive constructs and advised not to teach reading. Children were to become "ready" for reading by coloring and cutting on the line, copying shapes, and matching pictures. They learned to recognize numerals and count and to name letters, but words, including common sign and label words, were not taught. Story listening was recommended, but story reading, even if it occurred by memorizing and reciting the text, was discouraged.

Reading instruction was to be delayed until children were mature enough to listen to, follow, and learn with formal instruction. This was thought to occur at about age six. It was furthermore argued that those children who failed to learn to read in first grade had been slow to mature and thus not ready to learn.

The notion of delaying instruction until children are ready is still evident. Parents may be told to keep their child out of kindergarten for another year because the child acts immaturely, has motor or coordination problems, has low readiness test scores, or is somewhat younger than the others in the . . Some kindergarten teachers exclude low-scoring children from the regular program of instruction. Unfortunately, besides learning that they are somehow not as good as the other children, they are probably also learning how to tune out the teacher. Although these may be the children most in need of opportunities to print, look at books, and recognize letters and words, they are not learning how to talk about and use printed information.

Skill Learning

According to Durkin (1968), the emphasis on maturation and an unfolding readiness to learn began to change in the 1960s. In its place came a belief that experiences with well-organized tasks were the key to effective reading instruction, even for young children. It was proposed that the influences of maturation could be counteracted if learning materials and tasks

were appropriately sequenced from easy to difficult, using small increments, and with guided practice at each step. Instructional materials were to highlight these learning principles. Thus, instruction began to emphasize the role of environmental factors over developmental factors.

This instructional shift took place when research (e.g., Bloom, 1956; Skinner, 1953; Bruner, Goodnow, & Austin, 1956) was beginning to show that what tasks are given and in what order make a difference in learning. It was assumed that "most students can attain a high level of learning capacity if instruction is approached sensitively and systematically, if students are helped when and where they have learning difficulty, if they are given sufficient time to achieve mastery, and if there is some clear criterion of what constitutes mastery" (Bloom, 1976, p. 4).

Reading activities were organized into sets of skills, taught in a particular order, and measured in terms of attainment or mastery of the skills. These were organized as reading readiness tasks, thus utilizing one part of the maturational concept, that of preparing children for reading. Reading readiness tasks reflecting this outlook are part of most commercial materials for kindergarten. These materials typically feature stepwise exercises in picture matching, picture sequencing, letter recognition, letter tracing, and copying.

Such reading readiness tasks have become the principal content of kindergarten reading. It is assumed that they prepare children for reading using visual orientation and discrimination tasks, teaching letter identification, and acquainting children with a few of the words to appear in the first-grade textbooks. Word or story reading is seldom taught. For example, one popular 1983 basal program has pictures with no words or letters on about half of the children's pages, pictures with letters on a quarter, and words with letters or pictures on the remaining quarter. No pages have words alone. Tasks on the picture pages include discrimination of colors or shapes and left-right progression tasks. Pages with letters and pictures together are intended to help children match letter names with objects that begin with the letter. Word pages usually involve a copying or tracing task. However, most of the words are not a required part of this program. Learning words and letter sounds are an optional instructional step taught in first grade.

Programs such as this one reflect a skill-based perspective with activities and tasks hierarchically ordered by difficulty. For example, letter names and their visual discrimination are taught before sounds and the words in which they appear. Also, few comprehension skills are taught, because letters and some sight words are thought to be needed first.

Instruction in these programs is organized by presenting a skill, followed by practice materials that are arranged in terms

of word and sentence difficulty. For example, a typical lesson, meant to teach children to identify letters, directs them to the upper- and lowercase forms of the letter on the page and asks for the name. Next they look at the picture, which contains several examples of objects that begin with the letter. The children are told the names of the objects and that those words begin with the letter being studied. A practice exercise follows in which children are to listen to the name of the picture and circle the letter that fits. Flaws in this lesson include the following: no opportunity for children to think of words beginning with the letter or for the teacher to assess their understanding of the letter-sound-to-word connection; and practice materials that do not adequately test the concepts.

Problem Solving

An alternative perspective draws on the notion of reading as a thinking and understanding act and learning to read as a constructive, problem-solving process. This means, for example, that while children can be given information to learn and practice in a stepwise fashion, they must interpret the ideas and relate them to their own knowledge and experience. They must monitor their understanding and put together their own underlying structure of the information. In so doing, children's own thinking strategies about how to approach, learn about, and remember printed information become the focus of both the reading process and its instruction.

Effective older readers oversee their comprehension and guide their thinking and learning using appropriate reading and memory strategies. According to Reeve and Brown (1984), this idea is long-standing in psychology (consider the 1890 monograph of James). It was rediscovered by Flavell (1981), who realized that young children were not using appropriate memory strategies, though they could do so if reminded. The children lacked knowledge about memory processes, principally, knowing how to reflect about the process of memorizing information and having conscious control of its operation. These abilities, however, are found in older children who are good readers.

Viewing reading as a problem-solving activity and having conscious control of one's thoughts as one reads are referred to as comprehension monitoring. This is the ability to regulate and watch over one's comprehension while reading. For example, to set appropriate reading goals and plan how to read a text, a reader should know where the most important or most interesting information in the text is located and how to search for it. Realizing when one has stopped comprehending and knowing how to choose and apply appropriate fix-up strategies when one does not understand are also critical.

While it is clear that comprehension monitoring is a component of successful reading, its links to preschool reading and language experiences and to kindergarten reading instruction have seldom been considered. Next are five tasks in which

research has shown an effect of comprehension monitoring. Each is briefly described and then related to kindergarten instruction.

Listening Comprehension and Production Tasks

Young children (5 to 7-year-olds) have difficulty differentiating inadequate messages from those that contain enough information (Markman, 1979) or from constructing complete messages (Robinson & Robinson, 1976). Flavell (1981) reported that the problems of younger children in detecting inadequate messages could be due to a willingness to adopt a less exact criterion. In the face of uncertainty, younger children accept closure too readily. This suggests that story listening activities, for example, should be followed by opportunities for kindergarten children to act out the important story events so that they can see the related pieces of texts and find occasions when the text is too limited.

Reading Comprehension Tasks

Younger and low-performing readers are less likely to detect text comprehension problems than are older, effective readers (Canney & Winograd, 1979; Markman, 1981). Moreover, they are less able to pick out difficult-to-remember stories (Owings, Peterson, Bransford, Morris, & Stein, 1980), more likely to focus on hard words rather than inconsistent information as being the cause of incomprehensible text (Garner, 1980, 1981), and less able to identify and correct anomaly and nongrammaticality in

sentences and judge and clarify ambiguity in reading, listening, or writing (Menyuk, 1984). Menyuk suggested that young and low-performing readers lack a broad base of linguistic knowledge. Discussion of story meaning in kindergarten ought to help prepare children for attention to the text meaning rather than to the words, letters, or pictures.

Protocol analyses. Readers can be asked to read aloud, stopping at predetermined points to tell what they are thinking about. The ability to discuss their reading problems and strategies is related to reading ability (Hare, 1981). Good but not poor readers use the following strategies: reading for meaning, rereading, selective reading, and adjusting reading speed (Hare & Pulliam, 1980). To help children develop these strategies in kindergarten, teachers might introduce children to poems, articles, and informational reports as well as to stories and discuss how to put on different "listening ears" for different texts.

Interview studies. Meyers and Paris (1978) found that older children are able to describe strategies for resolving comprehension failure. Younger and poor readers describe few monitoring strategies and use decoding-oriented rather than meaning-oriented strategies (Paris & Meyers, 1981; Thomas, 1980). Also, poor readers are absorbed in their own status as learners instead of focusing on comprehension (Fischer & Mandl, 1982). A possible antidote is for kindergarten teachers to encourage

children to talk about being confused by a story they hear and what they might do to understand it.

Reading performance tasks. DiVesta, Hayward, and Orlando (1979) found that poor readers are less likely to use appropriate look-ahead strategies to carry out a cloze task. Garner and Alexander (1982) found that students who use a question-predicting strategy without prompting, outperform students who do not use the strategy. The research suggests that while kindergarten teachers are reading stories to children they can stop and ask for predictions about what might happen next.

A problem-solving approach can be initiated in kindergarten to help children reflect on their knowledge, to oversee and guide their thinking, to plan, regulate, or monitor, and check their listening comprehension. Problem-solving activities might reduce the differences later between good and poor readers' ability to express and apply effective reading comprehension strategies. They should reduce the tendency to misidentify hard-to-read and flawed texts, to choose inappropriate and inadequate strategies, or to leap too quickly to resolution of text meaning.

Literacy Learning as a Problem-Solving Venture

There are other, more generally stated theoretical constructs about problem solving, derived principally from work on formal operational thought (Inhelder & Piaget, 1958). Siegler (1978), for example, describes how problem solving can be understood as an attitude or mode of thinking. It involves the

ability "to reason both inductively and deductively, to consider all possible outcomes, and to recognize and admit when the evidence is insufficient to reach any conclusion . . . Two conditions are thought to be crucial. One is thorough familiarity with the old way of doing things, either concrete operations or the established paradigm. The other is frequent encounters with problems in which the existing framework is clearly inadequate, problems in which the usual approach either yields no answers or incorrect ones" (p. 110).

To learn to read can be thought of as a problem-solving venture. For beginning readers, for example, a principal problem is recognition and recall of printed words. Children try out word recognition approaches, usually looking at the initial letter, then at most consonants, and then at the vowel with the consonants (Mason, 1976). The use of increasingly more sophisticated strategies reflects their more advanced knowledge about words and letter sounds. The ability to apply more appropriate word recognition strategies, however, requires great familiarity with print and an ability to realize that an old conceptual framework is not adequate. When a kindergarten program features printed information in context and encourages children to figure out ways to remember the words, it should lead to effective problem-solving tools for recognizing, understanding, and remembering printed information.

Language Analysis as a Vehicle for Literacy

Children who begin thinking analytically by talking about their language learn that language is not merely a way to convey oral information. According to Olson (1984), it leads to a different way of thinking and reasoning. Language then becomes a structure that can be studied, analyzed, and interpreted.

An analytic treatment of language is apparently fostered by middle-class parents. For example, Snow and Ninio (in press) show that mothers play a "naming game" when reading picture books to young children. Schieffelin and Cochran-Smith (1984) describe how storybooks are used by middle-class American parents not only to entertain but "as a way to initiate problem-solving discussions [and] a way to verify and introduce new information" (p. 6). Heath (1983) describes differences between middle- and low-income families' discussions with their children. Middle-income parents teach their children how to discuss events, answer questions, and structure their discussions with others. Low-income parents often do not.

Literacy and language development. Wells (1981) proposes three major phases of linguistic development. His third phase is similar to Olson's notion that language becomes an analytic tool. His three phases are:

1. Discovery of language, in which patterns of sound take on meaning and purpose and language represents or stands for objects and events.

2. Consolidation and diversification, in which acquisition of speaking, listening, and language-interpreting conventions are tuned to the required social contexts.
3. Detachment from immediate context, in which one is conscious of one's own mental states and able to reflect on one's own experience, to separate thought and action, and to separate language from its context.

Wells argues that the alphabetic writing system led to the "ability to abstract linguistic expressions from the particular content and contexts to which they initially referred . . . [so] with the acquisition of literacy comes a more detached and reflective attitude to experience and this, in turn, promotes higher levels of cognitive functioning than are readily available in cultures that are restricted to purely oral communication" (p. 243).

A similar point was made by Elsasser and John-Steiner (1977), who considered how the elaboration of inner thought is developed into its written form by learning to move from compact inner speech, through which experiences are stored, to the details and deliberations of a comprehensible written form. Using written language requires the person to develop a sense of personal control of language, eventually reaching a desire and need for educationally transmitted knowledge.

Kindergarten Implications

A kindergarten curriculum can promote literacy in conjunction with the development of problem-solving abilities. Problem solving can foster a use of word-recognition and comprehension-monitoring strategies. It can begin before children have learned to read, such as through discussion and acting out of written material, and can act as a guiding principle while learning to read. Given a problem-solving orientation from the start, children may form the habit of looking for familiar letter patterns and meaningful information as they read. However, learning to treat reading as an active, constructive process is likely to be most effective in a literacy-rich classroom environment with a program of activities that gives children the opportunity to talk about, listen to, read, write, and remember printed information. In this way reading, writing, and speaking become fully integrated and better related to their experiences at home and in the community.

Guidelines for establishing a kindergarten reading program are represented as three principles (Mason & Au, 1986): a literacy-rich classroom, a multifaceted program, and active processing. They are based on observation of successful kindergarten reading programs (Mason, Stewart, & Dunning, 1986), analysis of story-reading lessons (Dunning & Mason, 1984; Peterman, Dunning, & Mason, 1985; Mason, McCormick, & Bhavnagri, 1983), and tryouts of reading materials with children in Head

Start and kindergarten classrooms (Mason & Au, 1984; McCormick & Mason, 1984).

Maintain a literacy-rich environment. Learning to read is supported when a classroom features familiar printed information and interesting literacy activities. Children's pictures can be on the walls, and paper and art supplies, as well as spaces for children's coats, can be labeled. There should be easily accessible books placed in a comfortable and quiet place. Alphabet posters, letter and word games, and other literacy-related games should be available. Time must be provided to use printed materials, and such use should be part of many different classroom activities. The classroom environment should support literacy and serve as a bridge between home experiences and the more demanding work of first grade.

Children can be provided a literacy-rich environment, given opportunities to listen to and discuss written information, and offered the chance to figure out how words are written, pronounced, and used meaningfully in sentences and stories. Developing literacy in a supportive fashion with familiar materials and tasks can be accomplished in many ways. The following suggestions from Mason (1980) and Putnam (1982) describe relating writing to drawing and painting, making functional use of print, and encouraging children to tell or try to read stories they have heard.

Drawing and painting can be tied to writing by encouraging children to print their names on all pictures they make and later by asking children to label their pictures or to construct stories that tell about the pictures. Children can use an invented spelling approach to describe their ideas or watch as the teacher prints out the information that children dictate below the picture. Eventually, they can take over the printing task.

Children can easily learn to recognize their names. Children's names can be used for roll call and written on cards for them to play with or refer to when labeling pictures. Sign and label reading can be extended with walks around the school and neighborhood to identify and copy signs. Children can collect favorite words from home, and words children want to know can be written on cards for them to collect.

Favorite stories that are listened to again and again are often memorized, and children imagine they are reading. A listening post allows children to choose and hear taped stories. The teacher should allow children to pick out their favorite books for the teacher to reread.

Stress a multifaceted approach to literacy. Learning to read using a problem-solving approach requires the use of diverse materials and a wide variety of tasks that are directly or indirectly related to reading, writing, speaking, and listening. Children begin to realize that reading can be woven into most of

their work and play activities when their own language, background experiences, and concepts are related to printed materials. Having children act out stories, use picture books to stimulate oral language, observe reading, and develop their writing are examples of this principle.

Paley (1981), who taped and transcribed children's activities, often had children discuss and act out the stories that she read to them. Many of the discussions continued over several days as children asked questions, experimented with solutions, and discussed their interpretations. The children actively searched for meaningful answers and explanations to stories.

Gambrell and Sokolski (1983) recommended the use of picture storybooks to stimulate children's oral language development. They recommended Caldecott Award-winning books because their illustrations have a high "picture/language potency." They suggested showing children the illustrations in a book and asking them what they think will happen, modeling how to study storybook pictures by explaining how a picture helps the reader understand the story, encouraging children to look at the pictures as they tell the story to themselves, having children take turns telling the story while they look at the pictures or work in pairs to tell a story to each other, and arranging times for children to dramatize or tape-record their version of a story.

McCormick and Mason (1984) recommended that adults sometimes talk about parts of the book, saying, for example, "Here's the name [or title] of the book" (pointing to the title), "Here's the beginning of the story," "Here's the first word," "This is the way we read" (running a finger from left to right under a line of print), "Now we read the next page" (turning the page or letting the child know that the left page has been read), and "This is the end."

Rereading favorite stories can help children learn the procedures for reading books and give them an appreciation for story reading. McCormick and Mason (1984) found that an effective approach is to show the cover of a book, name the title, and ask what the book might be about. After reading and discussing a story they can encourage children to help read it and later have them read without help. Rereading is fostered by keeping the books where the children can easily reach them, by suggesting that children read to one another.

Milz (1985) pointed out that writing can be developed before children begin reading. For example, ownership and identity can be established by labeling possessions, papers, pictures, and books; markers can identify coathooks and desks; and books can be signed out by the children. Written communication can be built by using mailboxes for each child and the teacher; personal notes can be sent to individuals and from the teacher. Children often use pictures as well as print to explain what is happening. Some

will begin to record special events and, as they become acquainted with good stories and authors, create their own stories.

Foster active processing by the child. Learning to read is an active process when the child uses a problem-solving approach to read and write. Old, familiar information (letters, words, stories) should be related by the child to new information and interpreted in terms of existing structures, or, when the new information does not fit, a search should be initiated for a more appropriate structure. This approach requires instruction that is centered on the child's ever-changing, improving constructs and interpretations about how to read, write, take part in classroom discussions, and listen. Reading and writing activities that focus on children's learning and thinking can include analysis of stories and writing before reading.

Although listening to stories is an important and popular kindergarten activity, a better support for literacy entails discussion of the story. Children can express the important story ideas, interpret the characters' actions, make predictions about what might happen, and analyze story motives and outcomes. The teacher can go back over the story after it has been read with a discussion or have children act out the important events.

Discussion can follow the story reading, or children can be coached to retell a story (Morrow, 1984). The structural elements of a story can be featured by reminding children to

begin their story with "Once upon a time," encouraging them to introduce the characters and describe the story setting. They may then be asked to tell what the main character wanted to do, what happened, and how the story ended.

Discussion of the story can help to foster not only concepts about how stories are structured but also children's listening comprehension and oral language abilities. The story information can excite children about reading as well as help to increase their vocabulary and knowledge of concepts. Finally, hearing written language helps children see how authors convey ideas in stories, how stories are organized, and how written language is usually different from their own oral language.

Learning to write can occur before children read. To encourage writing, Graves (1981) sets up conferences in which children are asked about the ideas that they have written or pictured. After a conference they can go back and expand, revise, and correct their ideas. Control of the writing process and the topic is in this way left in the hands of the child writer.

When children begin to write, teachers can help children set up and keep work banks (lists of common words needed in their writing), and they can establish a writing environment by setting up written conversations with them and responding in writing to their drafts and questions. Children keep in a writing folder a collection of everything they have written. Then, when a piece

is finished, children may show what they have done. One way is "Author's Chair Time," in which children meet as a group and a child author sits in the chair, reads the story to the class, and helps lead a discussion about it afterward. Another way is "Publication," in which children rewrite the piece carefully, illustrate and tape or staple it together, put on a hard cover, and place it in the library corner for everyone to read.

Summary

Until recently, kindergartens were designed to foster a positive attitude toward school and provide a well-rounded development through the use of suitable play, art, and social activities. As kindergarten programs have become almost universal, they are critically scrutinized. With newer perspectives about how young children learn and what they ought to be taught about how to read, with more than half the kindergarteners having already attended preschool and day care programs, and with school administrators and parents having expressed concern that early reading instruction is inadequate, kindergarten reading programs are undergoing change.

Unfortunately, many kindergarten programs have begun to rely on inappropriate materials and techniques taken from formal first-grade programs. The argument is made here that a problem-solving approach is a better model for kindergarten reading and that it can be applied in the context of kindergarten activities. A kindergarten child (Mason, Stewart, & Dunning, 1986) describes

this view through her explanation of how she is learning to read at home and at school:

> At home I read books and play school with my sister. She's two. I be the teacher. I read. I'm a good reader by sounding out words. [At school] she lets us read in class the books. She lets us read sentences. We put the writing [dictated stories] and we read them to ourselves. She lets us sound out words. She tells us to sound it out. She tells us to look at the picture and that tells us what they are doing and then you can read it. (p. 110)

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